

What IS CLAIMED IS:

1. An optical audio disc comprising:

a first pack (A Pack) including audio data;

a second pack (A-CONT Pack) managing said audio data being contained in said first pack;

a third pack (V Pack) including other data than said audio data;

a fourth pack (CONT Pack) containing information which manages the other data included in said third pack; and

a data array having said second pack placed at a head of said data array and more than one unit of said first, third, and fourth packs placed after said second pack.

2. An optical audio disc in accordance with claim 1, wherein an audio contents block unit (ACBU) is defined in said data array as such that said audio contents block unit is headed by said second pack and is terminated immediately before a subsequent second pack.

3. An optical audio disc in accordance with claim 2, wherein said audio contents block unit is provided at every predetermined time period in said data array.

4. An optical audio disc in accordance with claim 1, wherein said second pack contains time information as a time unit equivalent to one group of audio frames.

5. An optical audio disc in accordance with claim 1, wherein said second pack includes a table of contents information of said optical audio disc.

6. An optical audio disc in accordance with claim 1, wherein said data array further contains audio manager information other than said audio contents block unit, and

said audio manager information includes information to access to an audio data of said first pack.

7. An optical audio disc in accordance with claim 1, wherein said data array further contains audio title set information other than said audio contents block unit, and

said audio title unit information further includes information to access to an audio data in said first pack.

8. An optical audio disc in accordance with claim 1, wherein said second pack includes information for managing timing of the audio data in said first pack, and

said fourth pack contains information for managing timing of said other data in said third pack.

9. An optical audio disc in accordance with claim 1, wherein a unit of information which manages the audio data in said first pack, and a unit of timing of said other data in said third pack, are defined as a number of audio frames and a number of video frames respectively.

10. An optical audio disc comprising:

a first pack (A Pack) including audio data;
a second pack (A-CONT Pack) managing said audio data
being contained in said first pack;

a third pack (V Pack) including other data than said
audio data;

a fourth pack (CONT Pack) containing information which
manages the other data included in said third pack; and

a data array having said fourth pack placed at a head
of said data array and more than one unit of said first,
second, and third packs placed after said fourth pack.

11. An optical audio disc in accordance with claim 10,
wherein an audio contents block unit (ACBU) is defined in
said data array as such that said audio contents block unit
is headed by said fourth pack and is terminated immediately
before a subsequent fourth pack.

12. An optical audio disc in accordance with claim 11,
wherein said audio contents block unit is provided at every
predetermined time period in said data array.

13. An optical audio disc in accordance with claim 10,
wherein said second pack contains time information as a time
unit equivalent to one group of audio frames.

14. An optical audio disc in accordance with claim 10,
wherein said second pack includes table of contents

information of said optical audio disc.

15. An optical audio disc in accordance with claim 10, wherein said data array further contains audio manager information other than said audio contents block unit, and

said audio manager information includes information to access to an audio data of said first pack.

16. An optical audio disc in accordance with claim 10, wherein said data array further contains audio title set information other than said audio contents block unit, and

said audio title set information further includes information to access to an audio data in said first pack.

17. An optical audio disc in accordance with claim 10, wherein said second pack includes information for managing timing of the audio data in said first pack, and

said fourth pack contains information for managing timing of said other data in said third pack.

18. An optical audio disc in accordance with claim 10, wherein a unit of information which manages the audio data in said first pack and a unit of timing of said other data in said third pack, are defined as a number of audio frames and a number of video frames respectively.

19. An optical audio disc comprising:

a first pack (A Pack) including audio data;

a second pack (A-CONT Pack) managing said audio data contained in said first pack;

a data array having said second pack placed at a head of said data array and more than one unit of said first pack;

an audio contents block unit being defined in said data array as such that said audio contents block unit is headed by said second pack, and is terminated immediately before a subsequent second pack; and

said audio contents block unit being provided at every predetermined time period in said data array.

20. An optical audio disc in accordance with claim 19, wherein said second pack contains time information as a time unit equivalent to one group of audio frames.

21. An optical audio disc in accordance with claim 19, wherein said second pack contains a table of contents information of said optical disc.

22. An optical audio disc in accordance with claim 19, wherein said data array further contains audio manager information other than said audio contents block unit, and wherein said audio manager information includes information to access to an audio data of said first pack.

23. An optical audio disc in accordance with claim 19, wherein said data array further contains audio title set

information other than said audio contents block unit, and wherein said audio title set information further includes information to access to an audio data in said first pack.

24. An optical audio disc (Van-Disc) comprising:

a first pack (A Pack) including audio data;

a second pack (V Pack) including other data than said audio data;

a navigation pack (CONT Pack) containing reproduction control information which controls reproduction of data included in said first and second packs wherein said navigation pack is defined by the DVD-Video Specifications which is an international industry standard;

a managing area containing information which manages said audio data included in said first pack; and

a data array having said navigation pack placed at a head of said data array and said first and second packs placed after said navigation pack wherein a number of said first pack is more than that of said second pack.

25. An optical audio disc in accordance with claim 24, wherein said managing area includes a character information related to audio data.

26. An optical audio disc in accordance with claim 25, wherein said character information contains character information of more than two including two languages.

27. An optical audio disc in accordance with claim 24, wherein said managing area is an AMG (Audio Manager) and an ATS (Audio Title Set) information which are added to the DVD-Video data format of the DVD-Video Specifications.

28. An optical audio disc in accordance with claim 1, wherein a TOC (Table Of Contents) information including cuing information of a program and a movement of music are recorded in a lead-in area of said optical audio disc.

29. An optical audio disc in accordance with claim 10, wherein a TOC (Table Of Contents) information including cuing information of a program and a movement of music are recorded in a lead-in area of said optical audio disc.

30. An optical audio disc in accordance with claim 24, wherein a TOC (Table Of Contents) information including cuing information of a program and a movement of music are recorded in a lead-in area of said optical audio disc.

31. A reproduction apparatus which reproduces an optical audio disc, wherein said optical audio disc comprises a first pack (A Pack) including audio data and a second pack (A-CONT Pack) which manages said audio data contained in said first pack and comprises a third pack (V Pack) including other data than said audio data and a fourth pack (CONT Pack) containing information which manages the other data included in said third pack and further comprises a

data array having said second pack placed at a head of said data array and more than one unit of said first and third and fourth packs placed after said second pack, said reproduction apparatus comprising:

first reproduction means for reproducing the audio data in said first pack (A Pack) in accordance with information contained in said second pack (A-CONT Pack); and

second reproduction means for reproducing the other data in said third pack (V Pack) in accordance with information contained in said fourth pack (CONT Pack).

32. A reproduction apparatus in accordance with claim 31, wherein a TOC (Table Of Contents) information is recorded in said second pack for cuing the audio data of said first pack, and wherein said first reproduction means cues the audio data in said first pack in accordance with said TOC information.

33. A reproduction apparatus in accordance with claim 31, wherein a TOC information is recorded in other area than said first and fourth packs of said audio disc for cuing the audio data of said first pack, and wherein said first reproduction means cues the audio data contained in said first pack in accordance with said TOC information.

34. A reproduction apparatus in accordance with claim 31, wherein a TOC information is recorded in a lead-in area of said audio disc for cuing the audio data of said first pack,

and wherein said first reproduction means cues the audio data contained in said first pack in accordance with said TOC information.

35. A reproduction apparatus in accordance with claim 31, wherein each said second and fourth packs contains a time managing information which reproduces the audio data and the other data included in said first and third packs, and wherein said first and second reproduction means reproduce simultaneously the audio data and the other data contained in said first and third packs in accordance with said time managing information.

36. A reproduction apparatus which reproduces an optical audio disc, wherein said optical audio disc comprises a first pack (A Pack) including audio data and a second pack (A-CONT Pack) which manages said audio data contained in said first pack and comprises a third pack (V Pack) including other data than said audio data and a fourth pack (CONT Pack) containing information which manages the other data included in said third pack and further comprises a data array having said fourth pack placed at a head of said data array and more than one unit of said first and second and third packs placed after said fourth pack, said reproduction apparatus comprising:

first reproduction means for reproducing the audio data in said first pack (A Pack) in accordance with information contained in said second pack (A-CONT Pack); and

second reproduction means for reproducing the other data in said third pack (V Pack) in accordance with information contained in said fourth pack (CONT Pack).

37. A reproduction apparatus in accordance with claim 36, wherein a TOC (Table Of Contents) information is recorded in said second pack for cuing the audio data of said first pack, and wherein said first reproduction means cues the audio data in said first pack in accordance with said TOC information.

38. A reproduction apparatus in accordance with claim 36, wherein a TOC information is recorded in other area than said first and fourth packs of said audio disc for cuing the audio data of said first pack, and wherein said first reproduction means cues the audio data contained in said first pack in accordance with said TOC information.

39. A reproduction apparatus in accordance with claim 36, wherein a TOC information is recorded in a lead-in area of said audio disc for cuing the audio data of said first pack, and wherein said first reproduction means cues the audio data contained in said first pack in accordance with said TOC information.

40. A reproduction apparatus in accordance with claim 36, wherein each said second and fourth packs contains a time managing information which reproduces the audio data and the

other data included in said first and third packs, and wherein said first and second reproduction means reproduce simultaneously the audio data and the other data contained in said first and third packs in accordance with said time managing information.

41. A reproduction apparatus which reproduces an optical audio disc (Van-Disc), wherein the audio disc comprises a first pack containing audio data and a second pack containing other data than said audio data and a navigation pack which is defined by the DVD-Video Specifications, said navigation pack containing reproduction control information for controlling reproduction of data in said first and second packs and a first management information for managing data which are contained in said first and second packs and a managing area containing a second management information which are defined by the DVD-Video Specifications, said second management information managing data which are included in said first and second packs, said reproduction apparatus comprising:

reproduction means for reproducing the audio data included in said first pack and the data included in said second pack in accordance with the reproduction control information included in said navigation pack which is defined by the DVD-Video Specifications and with a management information contained in said management area.

42. A reproduction apparatus in accordance with claim 41,

wherein said first management information further comprises a character information related to said audio data which are contained in said first pack, and wherein said reproduction means further reproduces said character information.

43. A reproduction apparatus in accordance with claim 41, wherein said first management information further comprises a menu information related to said audio data which are contained in said first pack, and wherein said reproduction means further reproduces said menu information.

44. a reproduction apparatus in accordance with claim 41, wherein the lead-in area of said audio disc is recorded with a TOC information which cues said audio data contained in said first pack, and wherein said reproduction means further cues said audio data contained in said first pack according to said TOC information.

45. A reproduction apparatus which reproduces one of a first audio disc and a second audio disc, wherein the first audio disc comprises a first pack containing a first audio data and a second pack containing other data than said first audio data and a navigation pack which is defined by the DVD-Video Specifications, said navigation pack containing a first reproduction control information for controlling reproduction of data which are contained in said first and second packs, said first audio disc comprises a first management information for managing data which are contained

in said first and second packs and comprises a first managing area containing a second management information which are defined by the DVD-Video Specifications, said managing area manages data which are included in said first and second packs, wherein the second audio disc comprises a third pack containing a second audio data and a fourth pack containing other data than said second audio data and at least one second managing area containing a second reproduction control information for controlling reproduction of data which are contained in said third and fourth packs, said reproduction apparatus comprising:

first reproduction means for reproducing said first audio data included in said first pack and said data included in said second pack of said first audio disc in accordance with said first reproduction control information included in said navigation pack which is defined by the DVD-Video Specifications and said second management information contained in said managing area; and

second reproduction means for reproducing said second audio data included in said third pack and the data included in said fourth pack of said second audio disc in accordance with said second reproduction control information included in said control pack.

46. A reproduction apparatus in accordance with claim 45, wherein a lead-in area of each of said first and second audio discs is recorded with a TOC information which cues each of said first audio data contained in said first pack

of said first audio disc and said second audio data contained in said third pack of said second audio disc, and wherein said first and second reproduction means further cue the audio data contained in said first and third packs according to said TOC information.

47. A reproduction apparatus in accordance with claim 45, wherein both of said first and second audio discs are further recorded with respective audio menus related to audio data which are contained in both of said first and third packs, and wherein said first and second reproduction means further reproduce respective audio menus.

48. A reproduction apparatus in accordance with claim 45, wherein said first and second audio discs are further recorded with audio text data related respectively to said first and second audio data which are contained respectively in said first and third packs, and wherein said first and second reproduction means further reproduce said audio text data respectively.

49. A reproduction apparatus which reproduces one of an audio disc and a DVD-Video disc, wherein the audio disc comprises a first pack containing a first audio data and a second pack containing other data than said first audio data and a first navigation pack which is defined by the DVD-Video Specifications, said navigation pack contains a first reproduction control information for controlling

reproduction of data which are contained in said first and second packs, and said audio disc comprises a first management information for managing data which are contained in said first and second packs and a managing area containing a second management information which are defined by the DVD-Video Specifications, said managing area manages data which are included in said first and second packs, wherein the DVD-Video disc comprises a third pack containing a second audio data and a fourth pack containing video data and a second navigation pack which is defined by the DVD-Video Specifications, said second navigation pack containing a second reproduction control information for controlling reproduction of data which are contained in said third and fourth packs, said reproduction apparatus comprising:

a first reproduction means which reproduces the audio data included in said first pack and the data included in said second pack of said audio disc in accordance with the reproduction control information included in said navigation pack which is defined by the DVD-Video Specifications and said first management information; and

a second reproduction means which reproduces the audio data included in said first pack and the data included in said second pack of said DVD-Video disc in accordance with the reproduction control information included in said navigation pack which is defined by the DVD-Video Specifications.

50. A reproduction apparatus in accordance with claim 49,

wherein the lead-in area of said audio disc is recorded with a TOC information which cues said first audio data contained in said first pack, and wherein said first reproduction means further cues said first audio data contained in said first pack by means of said TOC information.

51. A reproduction apparatus in accordance with claim 49, wherein said audio disc is further recorded with a audio menu related to said first audio data which are contained in said first pack, and wherein said first reproduction means further reproduces said audio menu.

52. A reproduction apparatus in accordance with claim 49, wherein said audio disc is further recorded with audio text data related to said first audio data which are contained in said first pack, and wherein said first reproduction means further reproduces said audio text data.

53. A reproduction apparatus in accordance with claim 49, wherein each of said first reproduction means and said second reproduction means functions as an audio signal reproduction circuit.

54. An optical audio disc in accordance with claim 24, wherein said managing area includes a TOC (Table Of Contents) information of said optical audio disc.

55. An optical audio disc in accordance with claim 24, wherein said optical audio disc further comprises a first management information for managing data which are contained in said first and second packs and another managing area containing a second management information which are defined by the DVD-Video Specifications, and wherein said second management information manages data which are included in said first and second packs.

56. An optical audio disc in accordance with claim 55, wherein said first management information includes a TOC information of said optical audio disc

57. A reproduction apparatus in accordance with claim 45, wherein said first audio disc is defined as an Van-Disc.

58. A reproduction apparatus in accordance with claim 45, wherein said first audio disc is defined as an Avd-Disc.

59. A reproduction apparatus in accordance with claim 45, wherein said second audio disc is defined as a DVD-Audio disc.

60. A reproduction apparatus in accordance with claim 45, wherein said first and second managing areas of said first and second audio discs are recorded with a TOC information which cues each of said first audio data contained in said first pack of said first audio disc and said second audio

data contained in said third pack of said second audio disc,
and wherein said first and second reproduction means further
cue the audio data contained in said first and third packs
according to said TOC information.

61. A reproduction apparatus in accordance with claim 49,
wherein said managing area of said audio disc is recorded
with a TOC information which cues said first audio data
contained in said first pack, and said audio disc is defined
as a DVD-Audio disc, and wherein said first reproduction
means further cues said first audio data contained in said
first pack by means of said TOC information.